

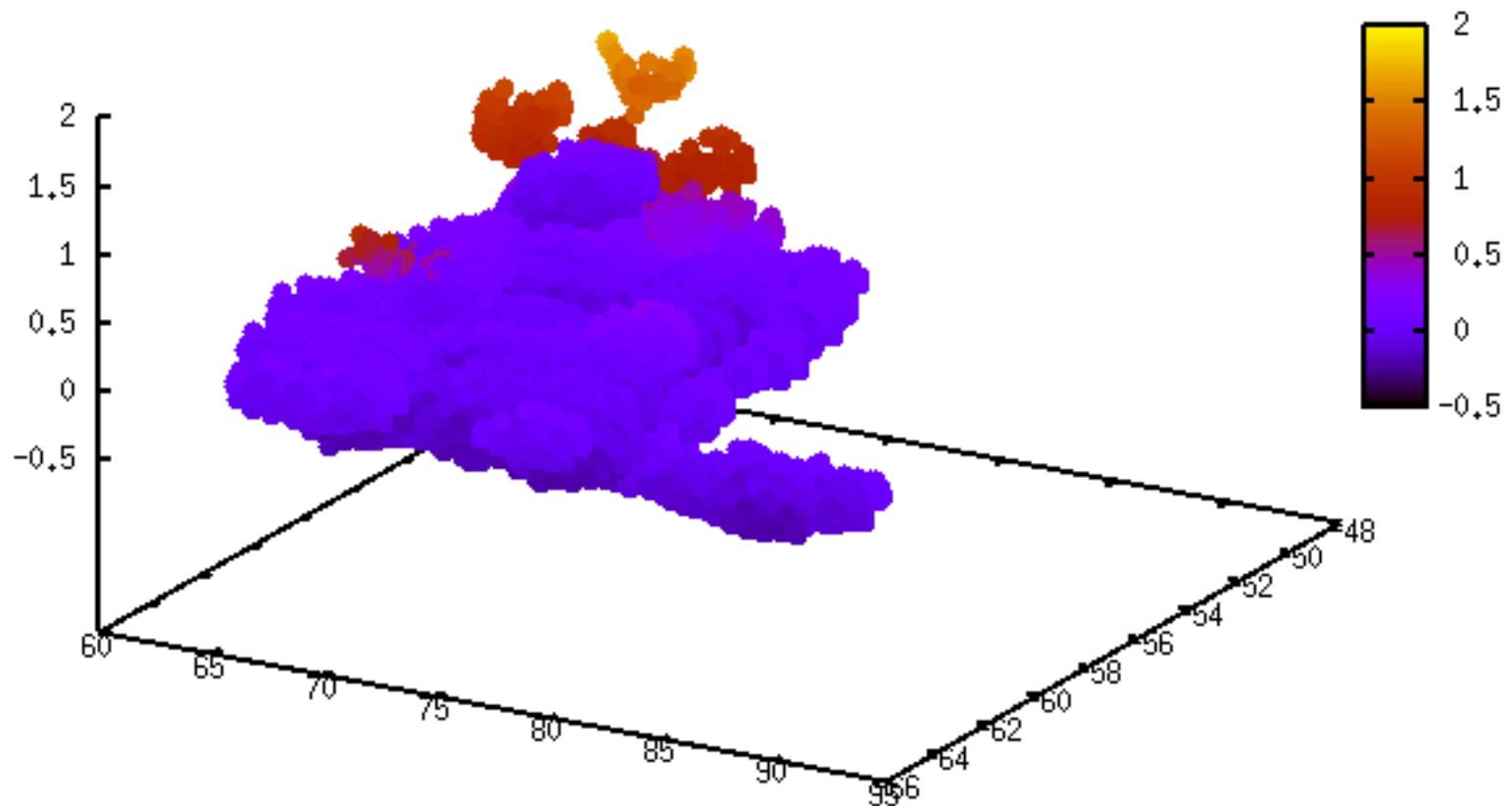
# SPTE Calibrations

(featuring 2MASS, APASS, GCM, and PreCam)

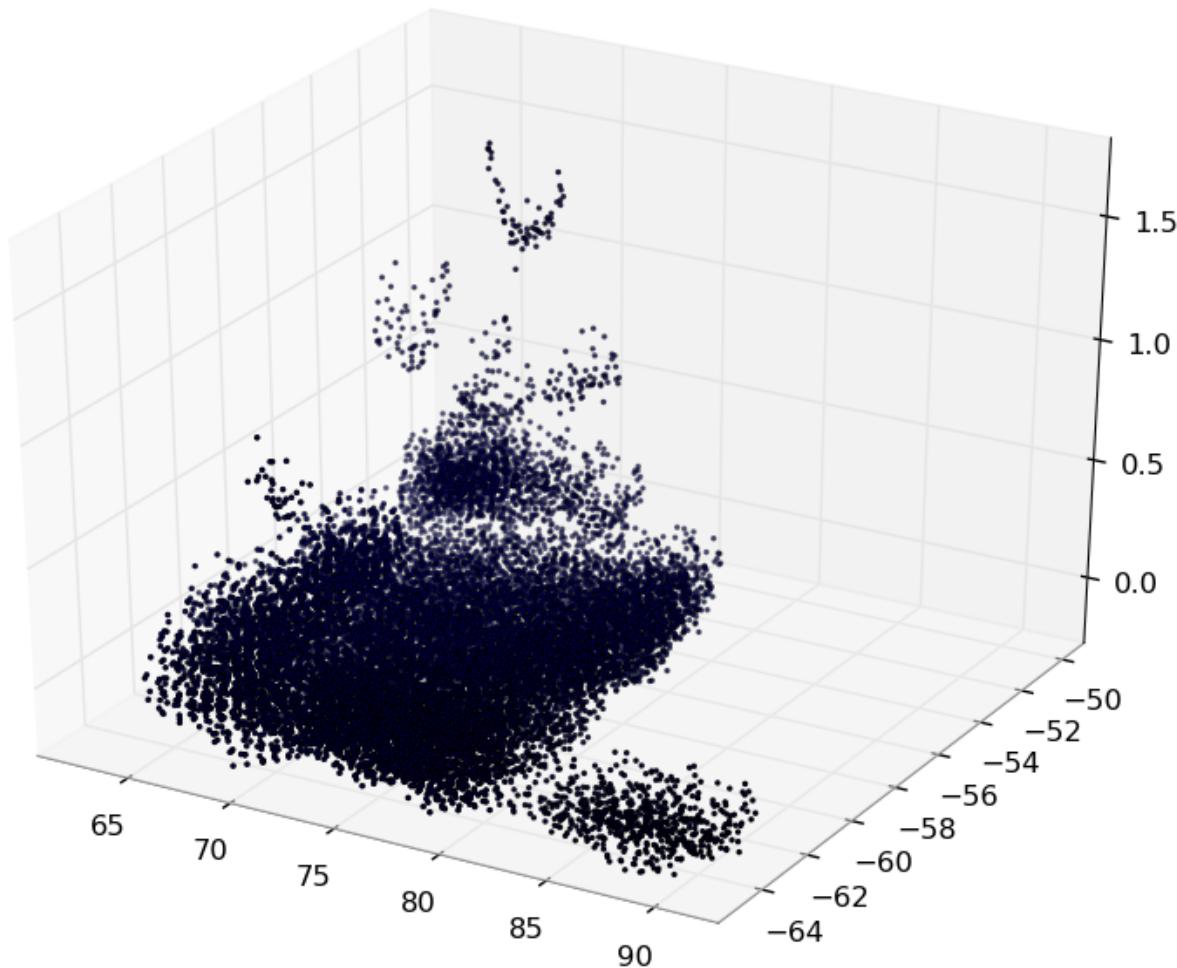
Kyler Kuehn  
Australian Astronomical Observatory

Calibrations Telecon 2013-07-26

# GCM ZeroPoint Variation I



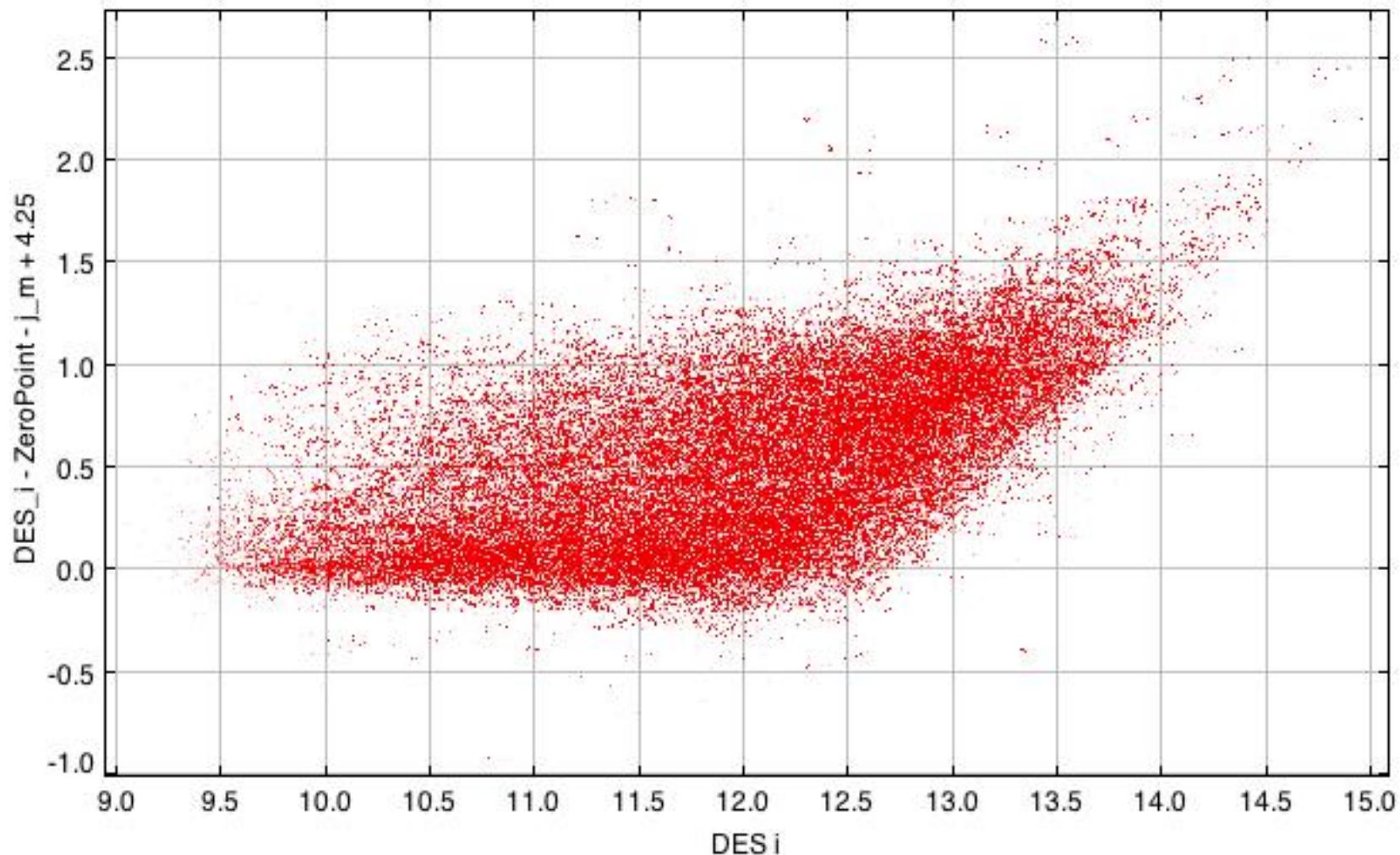
# GCM ZeroPoint Variation II



Significantly higher values in NW corner of SPTE  
Also systematic trend downward toward SE corner

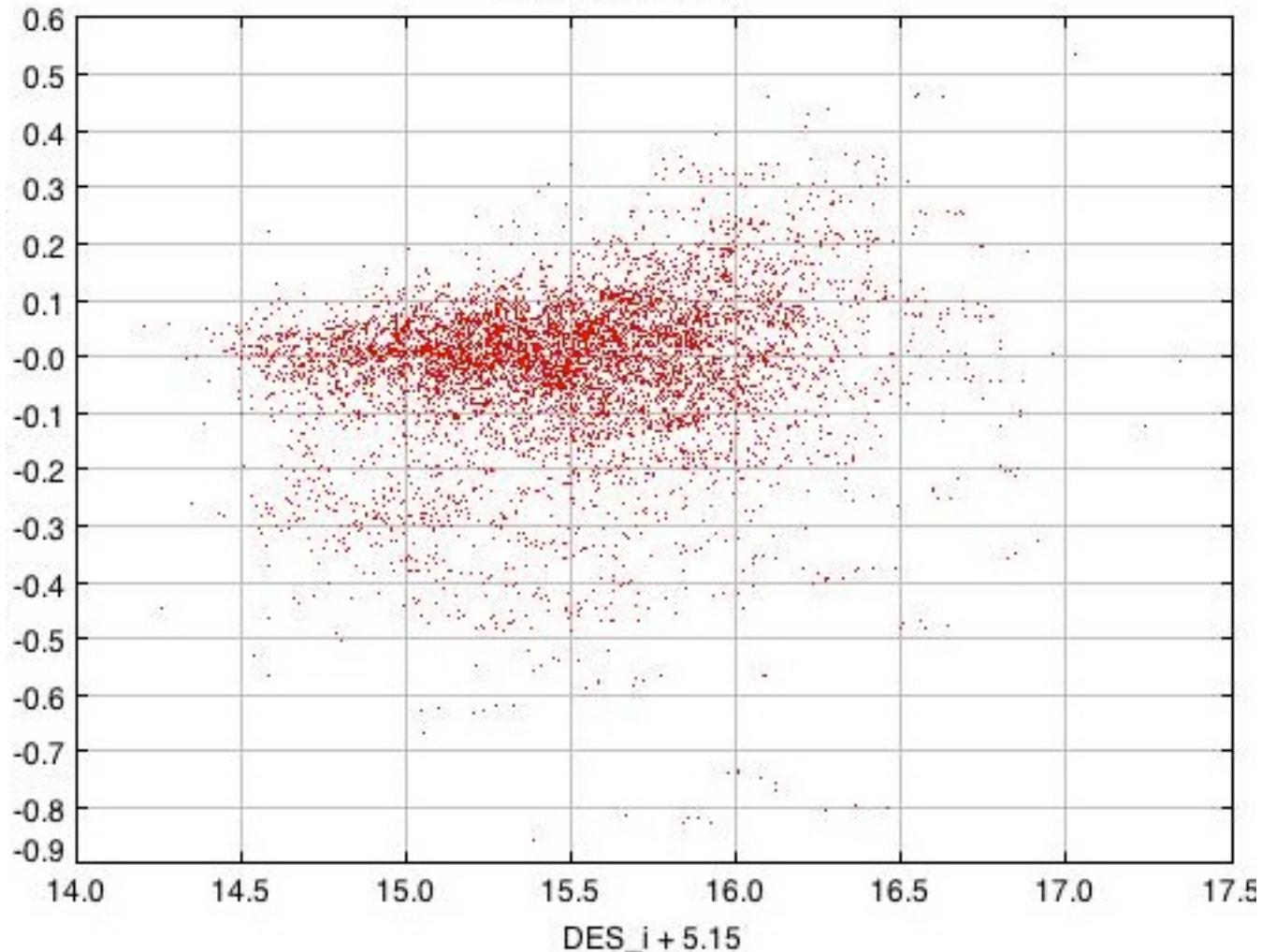
# DES i – ZeroPoint - 2MASS j

DES – 2MASS Magnitude Difference



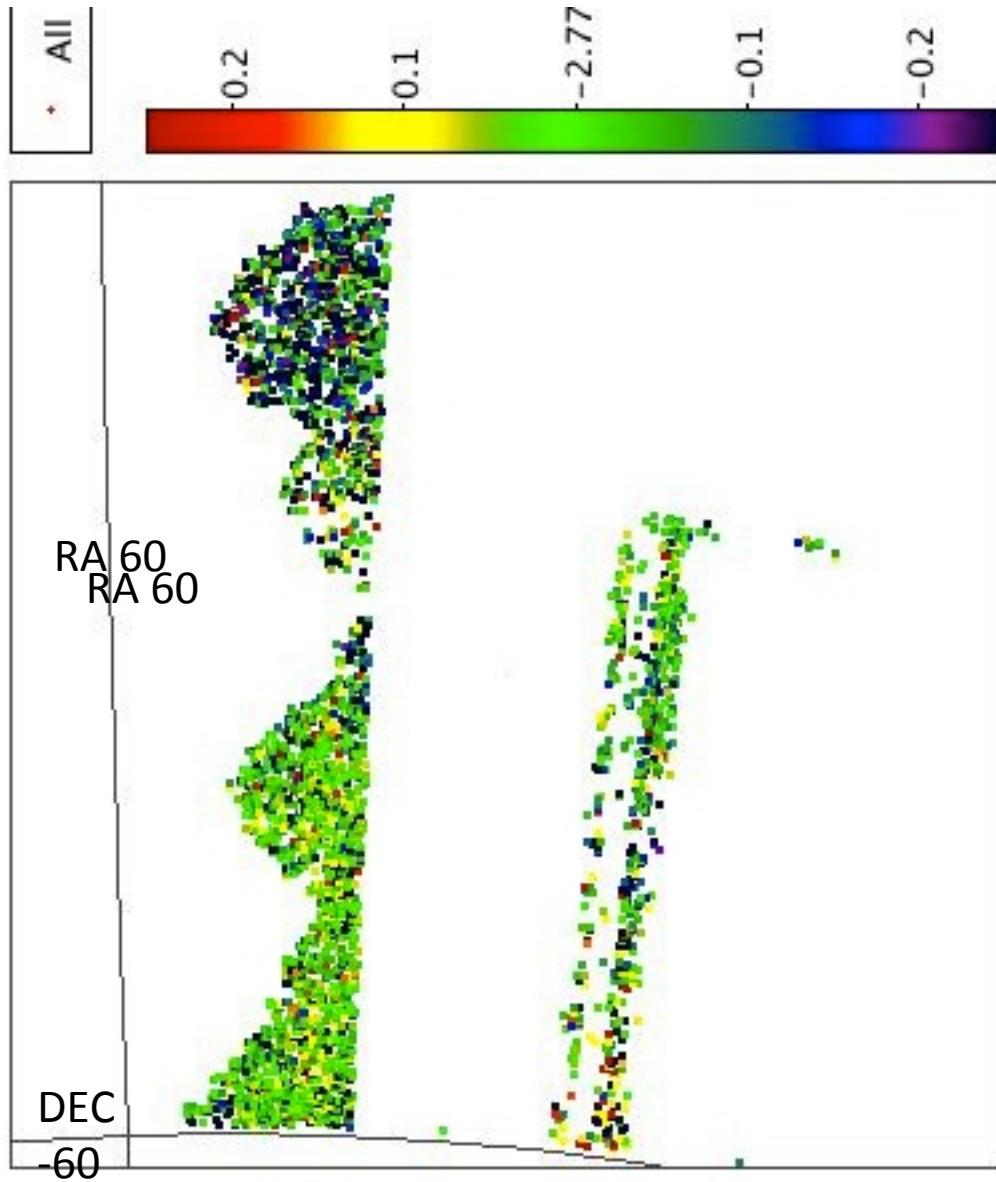
Significant variation, but of course, these are different filters!

# DES i – ZeroPoint – APASS i



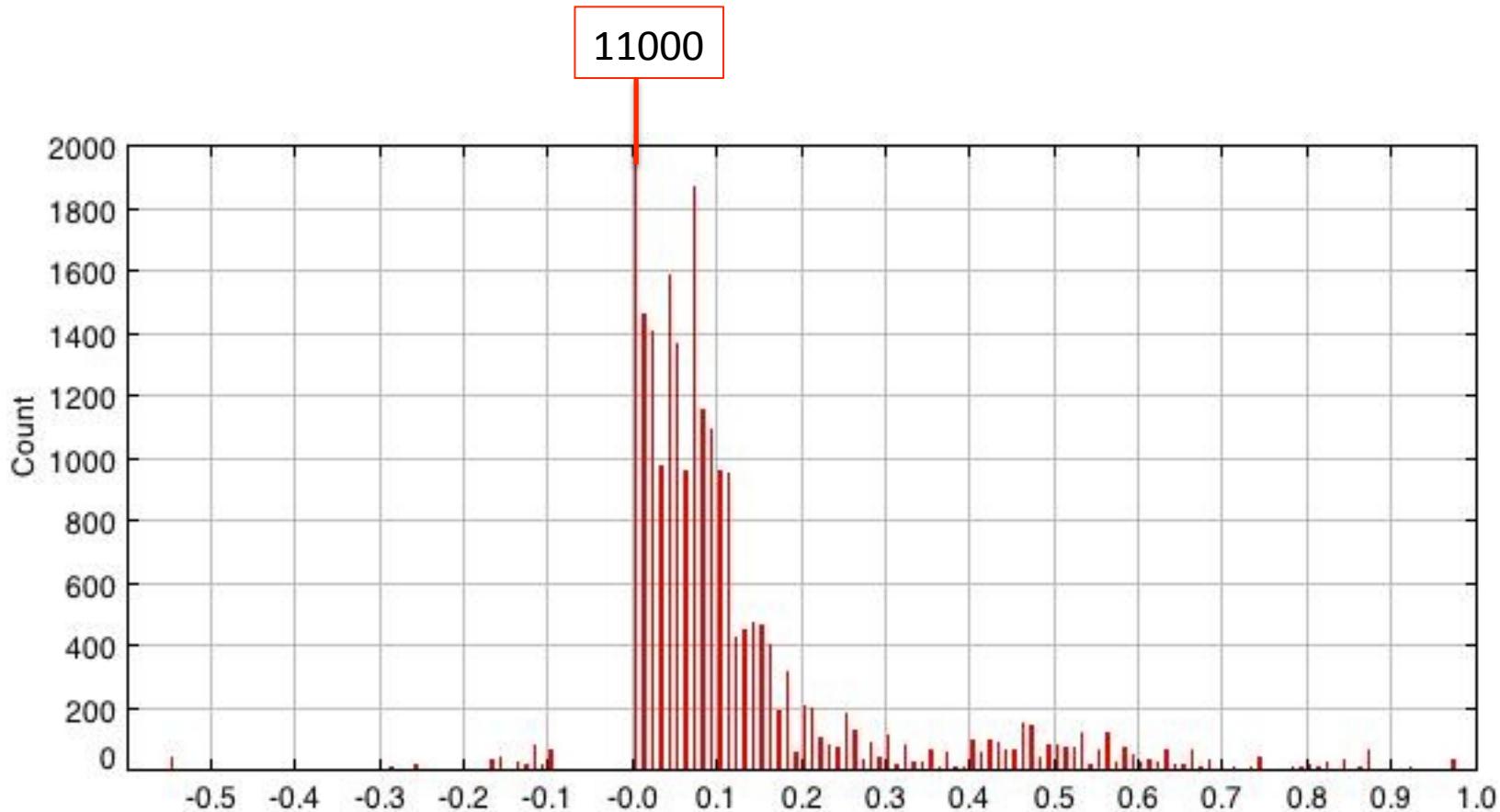
Fairly good matching at bright end, but can be improved

# DES i – ZeroPoint – APASS i



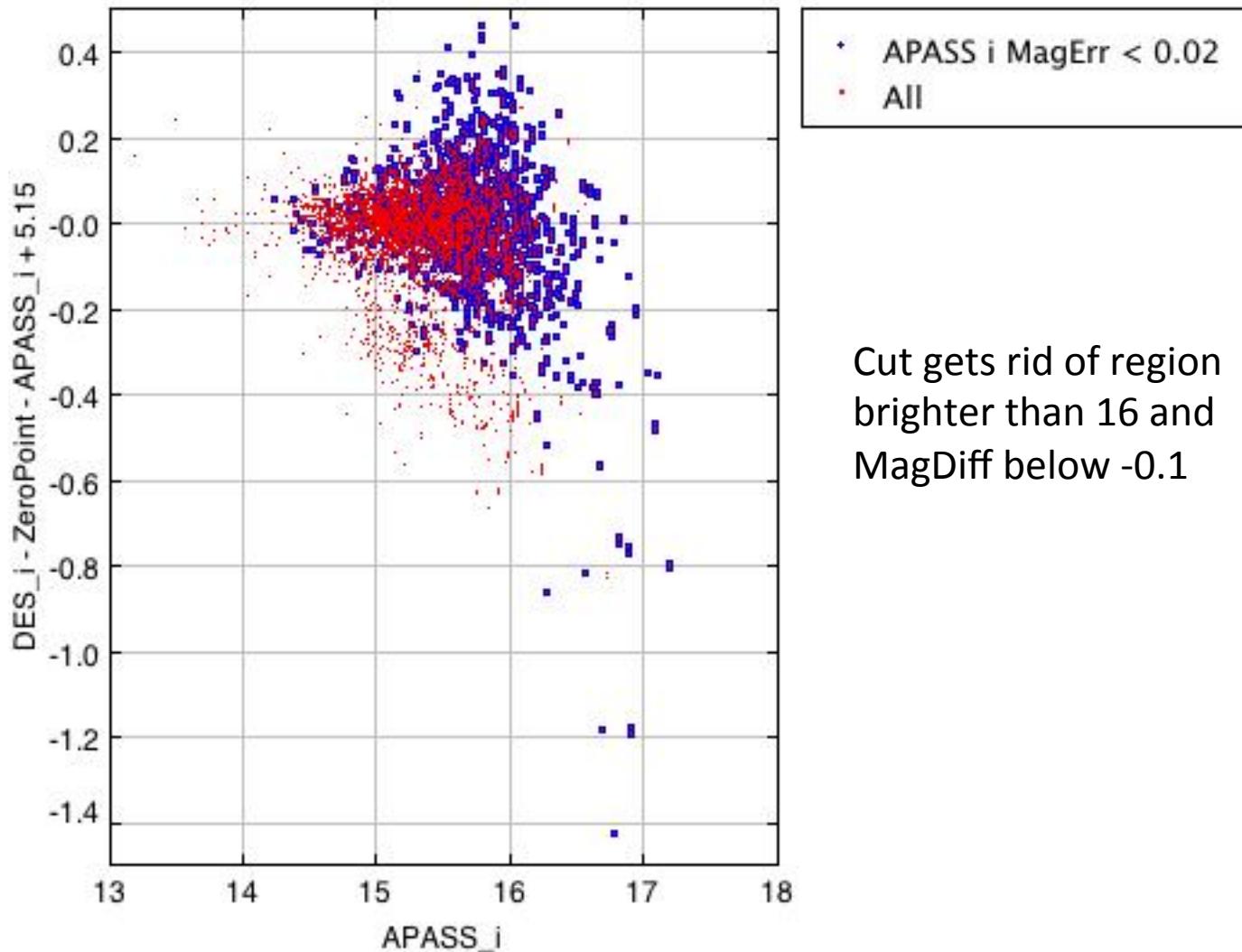
A selection of APASS matches shows a systematic trend of too-low values in NW corner and (to a lesser extent) too high values in the SE corner.

# APASS i Mag Error

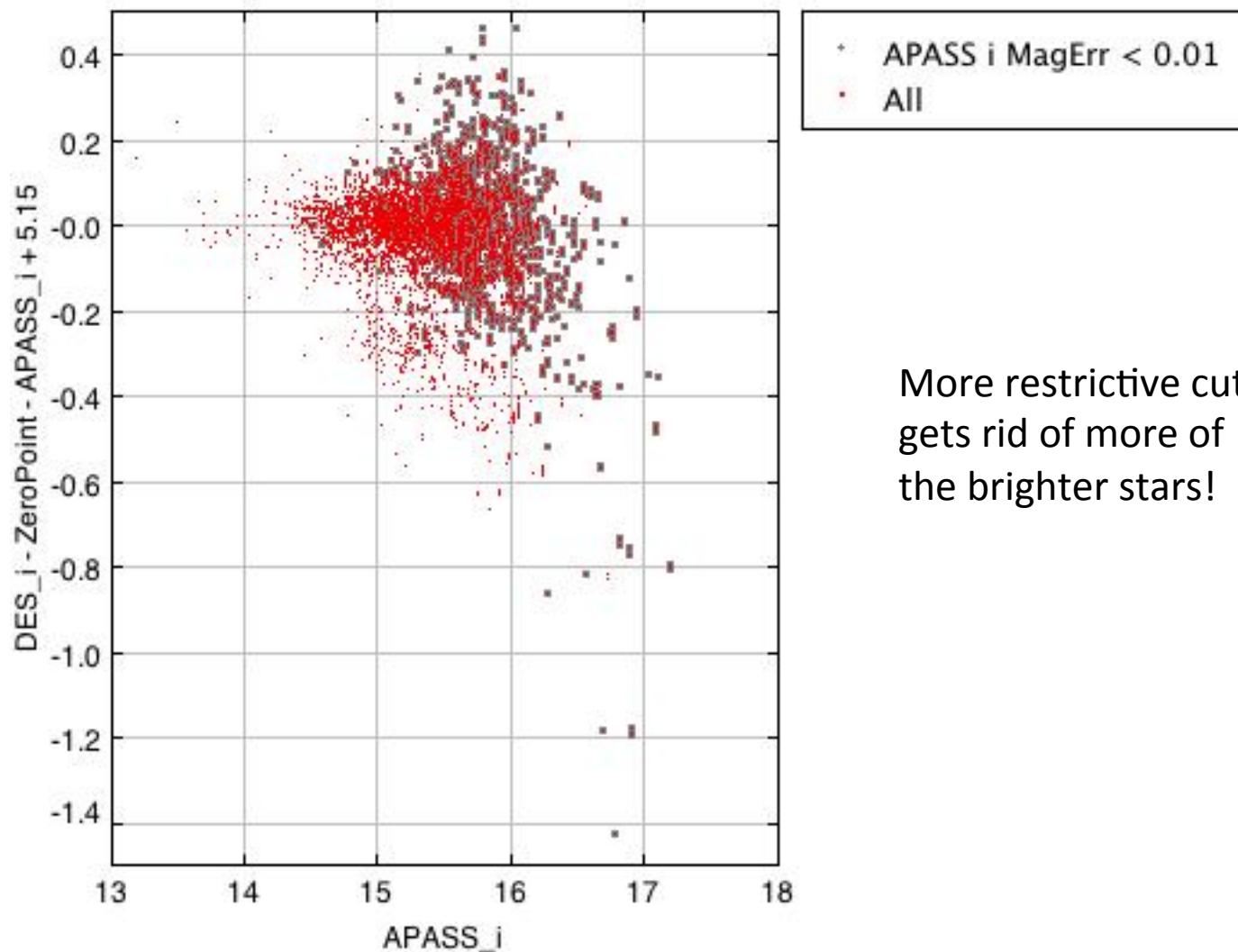


Cutting on APASS MagErr < 0.02 will leave sufficient statistics...

# APASS MagError<0.02

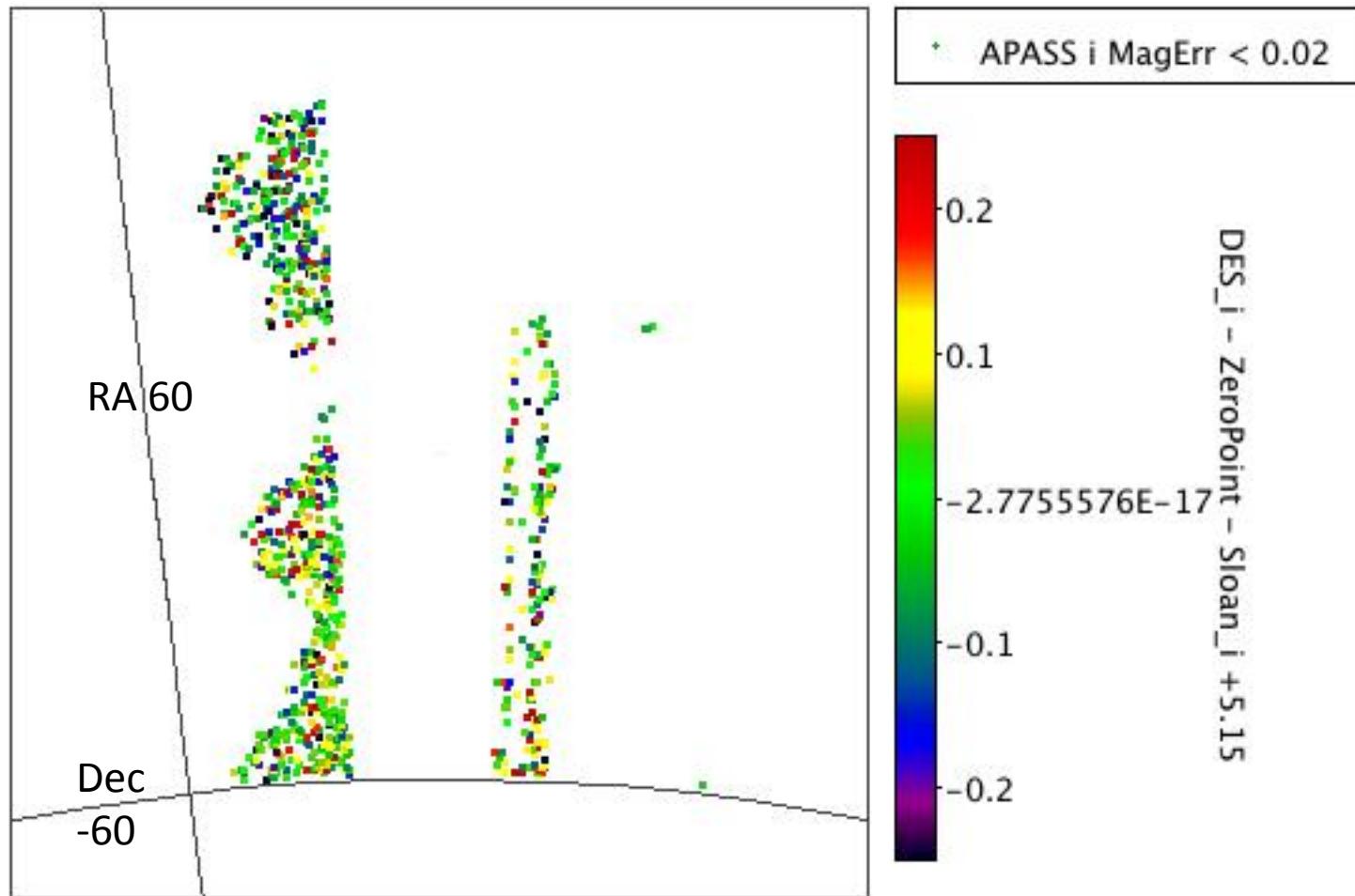


# APASS MagError<0.01



# DES i vs. APASS i (RA, Dec)

SPTE DES i vs. APASS i



Statistics are lower, but the NW region looks better, while the SE region is still too high.

# The Next Steps...

N.B. This work compares DES i-band to 2MASS and APASS **without** PreCam calibration anchors!

Now that the procedure is finalized, the next step is to compare DES data to

- 1) the full APASS dataset for this region  
(currently using only ~20% of APASS data)
- 2) with PreCam in the GCM ZeroPoint determination
- 3) for g, r, and i band.